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10/775,609	02/10/2004	Hongjun Zhang	1578.101	1602

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EXAMINER

SHARMA, SUJATHA R

ART UNIT PAPER NUMBER

2618

DATE MAILED: 10/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/775,609

Applicant(s)

ZHANG ET AL.

Examiner

Sujatha Sharma

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-19 is/are allowed.
- 6) ☒ Claim(s) 1-14, 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C.

119(a)-(d) which papers have been placed of record in the file.

Specification

1. Claim 8 is objected to because of the following informalities

In line 7 of claim 8, "too" should read as --to--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5,7,12,13,20 are rejected under 35 U.S.C. 102(b) as being anticipated by Watanabe [US 6,285,662].

Regarding claim 1, Watanabe discloses a method for selecting the size of the contention window to transmit packet of data on a random access channel in a multi user scheme. Watanabe further discloses a method comprising:

- a channel allocation request generator selectably operable when data is available to be communicated by the mobile node to the network part, said channel allocation request

generator for selectably generating a channel allocation request to communicate the data from the mobile node to the network part; see col. 7, line 66 – col. 8, line 25

- a selector operable at least absent of detection at the mobile node of a response to an initial channel allocation request generated by said channel allocation request generator and determination that communication conditions on the radio link are inadequate, said selector for selecting when to cause said channel allocation request generator to generate at least a first subsequent channel allocation request. See col. 11, line 47 – col. 12, line 19

Regarding claim 2, Watanabe discloses a method further comprising a counter coupled to receive indications when said channel allocation request generator generates a channel allocation request, said counter for maintaining a count value representative of a cumulative count of channel allocation requests generated by said channel allocation request generator to request the allocation of the channel capacity to communicate the data. See col. 8, lines 37-46.

Regarding claim 3, Watanabe discloses a method wherein said selector is further coupled to said counter to receive the count value maintained thereat, selection made by said selector to cause said channel allocation request generator to generate the subsequent channel allocation request selectably responsive to the count value maintained at said counter. See col. 8, lines 37-46

Regarding claim 4, Watanabe discloses a method wherein said selector causes said channel allocation request generator to generate the subsequent channel allocation request signal when the count value maintained by said counter is less than a selected threshold. See

Art Unit: 2618

Regarding claim 5, Watanabe discloses a method wherein said selector causes said channel allocation request generator to generate subsequent channel allocation request signals at selected intervals absent detection at the mobile node of the initial channel allocation request and any prior, subsequent channel allocation requests while the count value remains less than the selected threshold. See col. 11, line 47 – col. 12, line 19

Regarding claim 7, Watanabe discloses a method further comprising a timer coupled to receive indications of when said channel allocation request generator generates a channel allocation request, said timer for timing a selected time period subsequent to the generation of the channel allocation request. See col. 5, lines 8-45, col. 6, lines 2-9 and col.10, lines 34-57

Regarding claim 12, Watanabe discloses a method further comprising a timer coupled to receive indications of when said channel allocation request generator generates a channel allocation request, said timer for timing a selected time period subsequent to the generation of the channel allocation request, and wherein said selector is further coupled to said timer to receive indications at least of time-out of the selected time period by said timer, selection made by said selector to cause said channel allocation request generator to generate the subsequent channel allocation request selectably responsive to time-out of the selected time period by said timer. See col. 5, lines 8-45, col. 6, lines 2-9 and col.10, lines 34-57

Art Unit: 2618

Regarding claim 13, Watanabe discloses a method wherein the radio communication system defines a random access channel and wherein the channel allocation requests generated by said channel allocation request generator are generated upon the random access channel. See col. 4, lines 10-40 and col. 8, lines 5-24

Regarding claim 20, Watanabe discloses a method comprising:

- selectably generating an initial channel allocation request to communicate the data from the mobile node to the network part when data is available to be communicated by the mobile node to the network part; see col. 7, line 66 – col. 8, line 25
- selecting when to cause generation of at least a first subsequent channel allocation request absent detection at the mobile node of a response to the initial channel allocation request and upon determination that communication conditions on the radio link are inadequate. See col. 11, line 47 – col. 12, line 19

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6,8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe [US 6,285,662] in view of Shoji [US 2002/0160798].

Art Unit: 2618

Regarding claim 6, Watanabe discloses all the limitations as claimed. Watanabe also discloses a method wherein the contention window changes with communication/traffic conditions. See col. 9, lines 26-32.

However, he does not disclose a method further comprising a radio link indicia measurer coupled to receive indicia associated with the radio link, said radio link indicia measurer for measuring a value associated with the radio link.

Shoji, in the same field of endeavor, teaches a method where a received power measurement section measures the received power of the broadcast channel, which is then used to dynamically make channel assignment. The claim limitation received indicia associated with the radio link is broadly interpreted to mean measuring the signal strength (i.e. indicia) of the broadcast channel (the associated radio link). See Fig. 6, paragraphs 65, 66 and 79.

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to provide the method of measuring the signal strength of the broadcast channel IN Watanabe's invention in order to efficiently assign channels dynamically while coping with the changing traffic and channel conditions.

Regarding claim 8, Shoji further teaches a method comprising a radio link indicia measurer coupled to receive indicia associated with the radio link, said radio link indicia measurer for measuring a value associated with the radio link, and wherein said selector is further coupled measured by said radio link indicia measurer, selection made by said selector to cause said channel allocation request generator to generate the subsequent channel allocation request selectably responsive too the value associated with the radio link. Here a received power

Art Unit: 2618

measurement section measures the received power of the broadcast channel, which is then used to dynamically make channel assignment. The claim limitation received indicia associated with the radio link is broadly interpreted to mean measuring the signal strength (i.e. indicia) of the broadcast channel (the associated radio link). See Fig. 6, paragraphs 65, 66 and 79.

Regarding claim 9, Shoji discloses a method wherein the network part or base station generates a broadcast signal upon a broadcast channel defined upon the radio link and wherein the indicia associated with the radio link to which said radio link indicia measurer is coupled to receive comprises indicia associated with detection at the mobile node of the broadcast signal upon the broadcast channel. The claim limitation received indicia associated with the radio link is broadly interpreted to mean measuring the signal strength (i.e. indicia) of the broadcast channel (the associated radio link). See Fig. 6, paragraphs 65, 66.

Regarding claim 10, Shoji further discloses a method wherein the value measured by said radio link indicia measurer comprises a signal-strength value representative of at least relative signal strength of the broadcast signal broadcast upon the broadcast channel, detected at the mobile node. See Fig. 6, paragraphs 65, 66

Regarding claim 11, Watanabe further discloses a method wherein said selector selects to cause said channel allocation request generator to generate the subsequent channel allocation request signal when the value associated with the radio link, measured by said radio link indicia measurer, is beyond a selected threshold. See col. 11, line 47 – col. 12, line 19

Art Unit: 2618

5. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe [US 6,285,662] in view of Josse [US 6,104,929].

Regarding claim 14, Watanabe discloses all the limitations as claimed. However, he does not disclose a method wherein the radio communication system comprises a GSM (Global System for Mobile Communications) system that provides for GPRS (General Packet Radio Service) and wherein the channel allocation requests selectably generated by said channel allocation request generator are for allocation of channel capacity upon which to send GPRS-formatted data.

Josse, in the same field of endeavor, teaches a method of GSM/GPRS and a method to transmit GPRS-formatted data. See col. 1, line 42 – col. 2, line 15.

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to use the latest and standardized technology such as GPRS as taught by Josse in Watanabe's invention for transmission of data.

Allowable Subject Matter

Claims 15-19 are allowed.

Regarding claim 15-19, the invention is directed towards

- placing the mobile node in a first operational state in which the mobile node is permitted to request the allocation of the channel capacity upon the radio link;
- monitoring communication indicia on the radio link;
- placing the mobile node in a second operational state in which the mobile node remains permitted to request the allocation of the channel capacity upon the radio link responsive

to indications that the communication indicia monitored during said operation of monitoring is beneath a first threshold level; and

- placing the mobile node in a third operational state in which the mobile node is prohibited from requesting the allocation of the channel capacity if the mobile node is unable while in the second operational state, to detect a response to the channel allocation request.

The primary reference of Watanabe discloses a method of monitoring the radio link in terms of traffic load and requesting allocation of channels by the mobile node.

The secondary reference, Shoji, discloses a method where the mobile measures the signal strength of the broadcast channel to estimate the traffic load and correspondingly performs dynamic channel allocation.

However the above two references individually or in combination fails to disclose the above underlined unique feature of the invention obvious. Therefore the claim 15 and the dependent claims 16-19 are allowed.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hayashi [US 6,636,738] Radio network control apparatus and radio network control method

Chuang [US 6,052,594] System and method for dynamically assigning channels for wireless packet communications

Esmailzadeh [US 6,259,724] Random access in mobile telecommunication system

Art Unit: 2618

Feder [US 7,082,472]	Method for transmitting data over a network medium
Dick [US 7,072,327]	Contention access control system and method
Young [US 6,965,942]	Method and system for improving throughput over wireless LANs with dynamic contention window
Kuntze [US 6,681,256]	Method for dynamically selecting allocation of random channels in a communication system
Benevise [US 6,112,092]	Self-configurable channel assignment system and method

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sujatha Sharma whose telephone number is 571-272-7886. The examiner can normally be reached on Mon-Fri 7.30am - 4.00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on 571-272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/775,609

Page 11

Art Unit: 2618

A handwritten signature in black ink, appearing to be 'S' followed by a stylized flourish.

Sujatha Sharma
October 24, 2006